DOCUMENT RESUME

ED 161 449 IR 006 603

AUTHOR McBrayer, John
TITLE Guidelines for Specification of Competencies.
INSTITUTION West Central Wisconsin Consortium, La Crosse.
PUB DATE Feb 77
NOTE 34p.; For related document, see IR 006 604

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Educational Innovation; *External Degree Programs; *Guidelines; Higher Education; *Performance Based Education; Program Guides; Technical Reports
IDENTIFIERS *University of Wisconsin

ABSTRACT

Guidelines are presented for an approach to specification of competencies appropriate to Extended Degree Programs, i.e., the course or program translation approach. Program designers begin by identifying a number of courses or curriculum areas, then deductively reducing them to competency statements of greater specificity until instructional objectives are derived. This report suggests (1) levels for specification of competencies, (2) assessment criteria in specification of sub-competencies, (3) an outline of a format for competency specification, (4) general guidelines for competency specification, and (5) general guidelines for extended degree program initiation. Appendices include descriptions of competence statements, key competence decisions, a checklist of generic competencies, notes on the role of academic disciplines, and some options to be considered in developing the extended degree. (JEG)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED161449

UW-Extended Degree Programs

Technical Report 2

February 1977

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

John McBrayer

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

GUIDELINES FOR SPECIFICATION OF COMPETENCIES

University of Wisconsin
WEST CENTRAL WISCONSIN CONSORTIUM
Resource Center for Competency-Based Education
Director: John McBrayer,

University of Wisconsin-La Crosse Main Hall-2048 1725 State Street La Crosse, WI 54601

I 200 6603

TECHNICAL REPORT 2:

Guidelines for Specification of Competencies

by

John McBrayer

March, 1977

TABLE OF CONTENTS

Introduction. 1

The Course of Program Translation Approach. 2

Levels for Specification of Competencies. 5

Assessment Criteria in Specification of Sub-competencies. . . 8

An Outline for a Format for Specification of Competency . . . 10

General Guidelines for Specification of Competencies. 12

General Guidelines for Extended Degree Program Initiation . . 16

Appendix. 17

Some Descriptions of Competence and Competence Statements . . 18

Some Key Competence Decisions 22

Notes from Competency-Based Education: A Process for the Improvement of Education 25

Generic Competencies Checklist. 27

The Role of Academic Disciplines. 29

Some Options to be Considered in Developing the Extended Degree 31

Introduction

As the ten pilot extended degree programs complete the initial steps of organizing for development of ways and means to deliver extended degrees in a competency-based format, the need for information (based on authoritative experiences across the nation) on procedures for developing such programs will become increasingly evident. The Resource Center for Competency-Based Education offers this brief technical report, Technical Report 2: Guidelines for Specification of Competencies as a means of initial assistance.

The report is deliberately brief, providing just some suggested guidelines and working paper notations, in order that the reader is not overwhelmed with CBE jargon and in hopes that the guidelines and notations will elicit development ideas that meet specific needs and circumstances of each unique Extended Degree format.

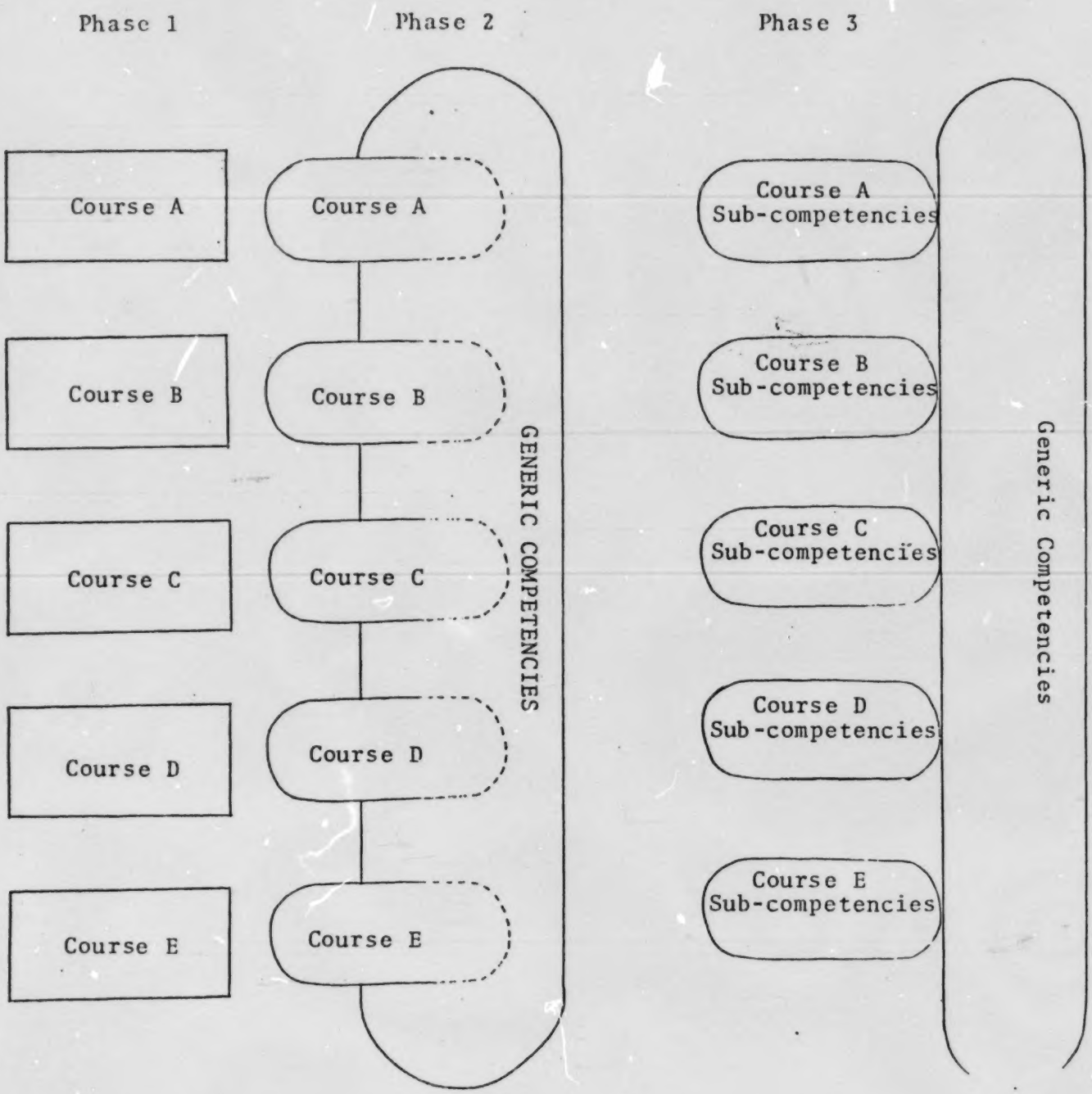
Although there have been a number of ways suggested in the literature for specification of competences, this technical report presents guidelines for an approach to specification of competencies felt (by the Resource Center for CBE) to be an appropriate approach for many of the Extended Degree Programs, i.e., the course or program translation approach. In this approach, program designers identify a number of courses or curriculum areas, then deductively reduce them to competency statements of greater and greater specificity until finally instructional objectives are derived.

The Course or Program Translation Approach to Specification of Competencies

W. R. Houston (1972), suggests that the program translation method is perhaps the easiest and most expedient approach to changing to competency-based education. The primary disadvantage of this approach is that it limits opportunities for reconsidering the total program from a new or different perspective than originally intended and as a result, it limits the opportunities for major changes in the program. In the development of extended degree program formats, however, the above disadvantage will not pose a problem.

The program translation approach is a variation of an approach where faculty members and staff simply reformulate current courses into a competency-based format. In the program translation approach, the first step is to clearly specify program characteristics and goals. After goals are specified, courses of the program are reviewed for common elements or aspects called, "generic" competencies. The generic competency is derived from the goals of the program. Basically, it is a composite of interactive learning outcomes that function to generate a new integration of skills and abilities to fit a broad range of experential settings as the need arises (e.g., in Liberal or General Education, critical thinking and problem-solving are generic skills, in teaching, discipline and motivation may refer to generic skills). After generic competencies are identified, they become the program organizing elements. The focus of the program centers around how course areas promote the development of generic competencies. Course areas of the program are then stated in terms of even more specific learning outcomes

or, are sub-competencies that promote the development of the generic competencies the program seeks to produce. From the sub-competencies of the program specific instructional objectives are derived and learning experiences prescribed. (See diagram)



Regular course areas usually taught in isolation.

From each course area common elements are identified.

Common elements become degree organizing element with other areas built on it.

Levels for Specification of Competencies

Generic Competency Levels

In the Extended Degree program levels for competencies are implied throughout. The usual first contact with levels occurs at the course division level. Program developers are asked to begin by focusing on upper division courses. Correspondingly the statement of initial generic competencies should all be based on the same level, i.e., the upper division level. As the Extended Degree Program expands in growth, the need for specification of generic competencies in lower division courses as needed, should be anticipated. When lower division generic competencies are specified, "lower division" should be clearly indicated in the specification of competency format (see the outline format for specification of competencies).

Sub-competency Levels

The sub-competency level may be viewed as a more specific aspect (or level) of a generic competency. At this point of specificity there is also need of other development "levels" (not for more specificity), but for grouping of sub-competencies that may be the expected sequence in the beginning, intermediate, and advanced stages of developing learning outcomes. These levels may also suggest the quality of student performance or attainment. It is important to remember that sub-competencies are intended to give the minimal level of sufficiency of performance. The addition of the concept of developmental "levels" to the sub-competency domain can give those teachers who work in this domain a clearer indication of the level of performance that

is required in cases where the sub-competence statement cannot be absolute or clear cut. Sub-competence statements should also always be clear to the student. Developmental levels help to identify the stage-by-stage climb by which the student progresses. Thus, developmental levels also provide the student with a clearer idea of at what point an individual is expected to be in order for "entry" into, as well as, "exit" from a particular stage of preparation for demonstration of a learning outcome.

In addition, the nature of the extended degree which evolves around concepts such as:

a. The assignment of credit equivalencies from campus to campus;
b. The assessment of an individual's experience as deserving of credit;
c. The passing of criteria-referenced test which measures competence in some area of content;
d. Where credit for a degree can be earned through transfer, proficiency, or equivalency examinations;
e. Individually-oriented educational systems that utilize independent study and/or other non-traditional means;

virtually requires as much information as possible be provided for assessment of competence and assignment of credit equivalencies. In the extended degree where the learner is held to be the central figure in the educational process and where demonstrated learning is valid regardless of the source, specification of sub-competencies in developmental levels are a key part of the operational mechanism for ensuring not only that conventional academic knowledge relates to competence, but also, that competencies relate to academic

knowledge.

In sum, the format for specification of competencies must be designed to provide information to those who receive or read it. At the generic competency level it can be assumed that the generic competencies stated are upper division generic competencies unless otherwise specified. In the sub-competency domain of specification of competencies development levels should be clearly indicated for each particular sub-competence statement.

Assessment Criteria in Specification of Sub-competencies

Any considerations concerning the adoption of a competency-based program must keep the problems of assessment firmly fixed in mind during the program planning process. Since the specification of competencies stage is a stage in the planning process where information concerning your CBE program is identified and specified, assessment criteria should be stated at this time. A key point to remember is that assessment criteria should be a reflection of the assumptions and goals upon which the program is based.

In the extended degree approach students may be assessed off-campus, as well as on campus. The Assessment Center will provide key technical assistance in efforts concerning assessment of students, but the Assessment Center needs information concerning the criteria and standards that the program developers prescribe for students who seek to obtain the degree in their program.

Assessment of the acquisition and demonstration of competence is not a simple process. It is hoped that the preceding discussion on guidelines for specification of competencies, especially the discussion on the specification of developmental levels will aid each program developer in the generation of a hierarchy of assessment strategies for their program.

Some reminding notes on some of the differences between CBE assessment and assessment in conventional programs seem appropriate here. A key aspect of CBE is that students are held accountable not only for the acquisition of a specific competency, but also for the demonstration of that competency. Students need not be held accountable for how they acquired the skills, only that they

have them.

Another aspect of CBE is that it is assumed that given enough time and instruction, most students can acquire mastery of the sub-competencies and objectives. Since mastery is the goals in competency-based efforts, time becomes subservient to mastery. Some students will take less time to achieve mastery than others. But the students that take more time are no less competent in the final analysis.

In CBE efforts, program implementers typically are less concerned about comparing students with each other than they are about comparing student abilities against present criteria. Although totally different criteria for assessment might be developed for use in CBE efforts, there must be an attempt to make the criteria public--especially to the student involved.

For the above reasons it is important that an assessment criteria statement accompany each sub-competency statement.

An Outline for a Format for Specification of Competency

The format that follows provides the reader with the following information: generic competencies, the level of generic competency, the related content or course areas, the sub-competency that relates to a particular generic competency, the developmental level of a particular sub-competency, and, assessment criteria for each sub-competence statement. For example in I.A.1.1., "I" gives the generic competency and level; "A" indicates the content or course area; "1" indicates the sub-competency developmental level; and, "1" indicates the particular sub-competence statement.

I. Specify Generic or Major Competency here (indicate if it is other than upper division in parentheses here)

A. Indicate content or course area here

A.1. Indicate content or course area and minimal developmental level here

A.1.1. Indicate the sub-competency that aims to develop the generic competency here
Indicate assessment criteria here

A.1.2. Indicate a different sub-competency that aims to develop the generic competency in the same course content here.
Indicate assessment criteria here

A.1.9.

A.2. Indicate higher level in same course or content area

A.2.1. Indicate higher level sub-competency in same course or content area here
Indicate assessment criteria here

A.2.9.

B. Indicate different course or content area here

B.1. Indicate different course or content area and minimal developmental level here

B.1.1. Indicate the sub-competency that aims to develop the generic competency here

Indicate assessment criteria here

etc. etc.

Indicate a different generic or major competency here

II. A. Indicate course or content area here

A.1. Indicate content or course area and minimal developmental level here

A.1.1. Indicate the sub-competency that develops the generic competency here

Indicate assessment criteria here

etc.

etc.

etc.

General Guidelines for Specification of Competencies

I. Identify characteristics of program: specify population, constraints, assumptions, goals, and notion of competence.

A. Agree on characteristics and prerequisites of the student population to be served by the program.

B. Identify and analyze potential constraints of the program (e.g., location limitation, resource limitations, time constraints, etc.).

C. Identify and analyze specific assumptions of the program (e.g., beliefs about learning, individualization, instructional roles, role of higher education, societal forces, etc.).

D. Identify the goals of the program.

E. Agree on the notion of competence.

1. Clarify what "competence" (e.g., is your aim, to develop student generic capabilities, to develop expert correctness in performance of a skill--proficiency, or, to develop content mastery) means in your program context.

2. Clarify how your program relates to a nationally known approach to CBE (e.g., the Generic Competency Approach, the Vocation or job-specific or professional approach, or, Discipline-mastery approach).

II. Develop a set of Generic Competencies that reflect and are in fact, derived from the overall goals of the program.

A. Competencies are interactive learning outcomes where skills and abilities are integrated.

B. Competencies should be viewed as existing in various learning outcomes domains. The learning outcome domain consists of levels of specificity. Interrelated in the learning outcome domain are Goals, competencies, sub-competencies, and objectives. Goals are the broadest statements one makes about the expected learning outcomes of a CBE program or course. Objectives are measurable descriptions of learning skills.

C. Competencies lie mid-range on the continuum of Goals-to-Objectives. The general idea is that competencies should be more specific than goals, sub-competencies more specific than competencies. For any program there will be more sub-competencies than competencies and more objectives than sub-competencies.

D. Goals encompass competencies, competencies encompass objectives. Each descending step is more specific in terms of the ability of a learner to demonstrate its accomplishment.

E. Although a competency encompasses many identifiable discrete individual behaviors, skills and attitudes, some of which can be specified in behavioral terms and others far less specific, a competency is a statement that describes the observable demonstration of a composite of specific skills, attitudes and behaviors. It is a statement that reflect the interaction of learning outcomes where skills and abilities are integrated. The learning of a large inventory list of individual skills is of little value or meaning unless these skills can be combined and interrelated so that, with practice the result is a capability for a performance by the learner that is greater than the sum of the individual skills and applicable across a variety of situations or contexts.

F. A competency statement then is a description of those performances that are based on the acquisition, integration, composite building and an application of a set of related skills and knowledge.

G. A generic competency is a competency that functions as a structuring principle in a whole series of discrete behaviors. The term "generic" refers to a small composite of mental operations that can produce a literally infinite variety of thought patterned actions. Generic refers to those competencies that have a limitless capacity for repatterning and recursiveness (i.e., capable of reapplication to their own output to produce new output) in application.

H. A generic competency is a composite of interactive learning outcomes that functions to generate a new integration of skills and abilities to fit a broad range of experential settings as the need arises. To be generic a competency has to be transferable or generalizable to a variety of contexts, disciplines, or situations.

I. Generic Competencies are the basic building blocks and organizing elements for sub-competencies in various areas of the CBE-Extended Degree.

III. Faculty members Analyze, Rate, or Agree Upon Generic Competencies for Degree Program.

A. A technique such as the Delphi technique might be useful.

1. Pool informed intuitive opinions of faculty members through the use of a series of questionnaires.

2. The data from each questionnaire are analyzed and refined and fed back in the next questionnaire until a near consensus group opinion is reached.

IV. Develop sub-competencies that promote the development of the generic competencies (in students) in areas throughout the curriculum of the degree program.

A. Sub-competencies focus on a particular area and are more specific than generic competencies.

B. When explicitly stated and used to help organize the curriculum, sub-competencies distinguish a competency-based program. They serve as elements to clarify goals and generic competencies. Correspondingly, specific instructional objectives, learning activities, and evaluation procedures are derived from them. Sub-competenices, like objectives, can be assessed in terms of:

1. How they serve and relate to the development of generic competencies.

2. Whether they are student oriented.

3. Whether they require the student to be reactive or proactive in learning efforts.

4. The technical adequacy of their construction (measurable statement, criteria-oriented, condition or context).

5. The clarity with which they convey to the reader their intent.

C. Sub-competencies are usually grouped in a classification scheme or taxonomy. Some classifications refer to former course titles, other classifications refer to taxonomies of cognitive activities (e.g., Bloom's Taxonomy), or skill processes.

D. Sub-competencies are specific enabling composite learning outcomes where skills and abilities are integrated. They reflect a level of specificity that indicate minimal levels of sufficiency for student performance. Format consistency for sub-competencies specificity should be considered.

E. Sub-competencies should provide cues for learning activities and learning experiences, as well as, student assessment. Sub-competencies are also grouped in terms of minimal levels of skills required. For example, a level 1 sub-competency would require a less complex performance than

a level 6 sub-competency. Levels of performance sufficiency suggest difference in the "quality" of learning outcomes.

F. Sub-competencies are hypothetical unvalidated constructs so they should never be considered final permanent parts of a program. They are always tenative elements to be refined, revised, regenerated and revised.

V. Faculty Members Analyze, Rate, or Agree Upon Sub-competencies for Degree Programs.

A. A technique such as the Delphi techniques might be useful.

VI. Develop Prototype Instructional Objectives

VII. Conceptualize Extended Degree Program Model Design Using Planning Papers of Extended Degree Program Developmental Guidelines #1.

General Guidelines for Extended Degree Program Initiation

I. Organize Staff Awareness and In-Service Programs

II. Organize Staff for Developmental task

III. Identify Characteristics of Program: Specify Population, Constraints, Assumptions, Goals, and Notion of Competence

A. Agree on characteristics and prerequisites of the student population to be served by the program.

B. Identify and analyze potential constraints of the program (e.g., location limitations, resource limitations, time constraints, etc.).

C. Identify and analyze specific assumptions of the program (e.g., beliefs about learning, individualization, instructional roles, role of higher education, societal forces, etc.).

D. Identify goals of the program.

E. Agree on the notion of competence.

1. Clarify what "competence" (e.g., is your aim, to develop student generic capabilities, to develop expert correctness in performance of a skill-proficiency, or, to develop content mastery) means in your program context.

2. Clarify how your program relates to a nationally known approach to CBE (e.g., the generic competency approach, the Vocation or job-specific or Professional approach, or, Discipline-Mastery approach).

IV. Identify process for determining Generic Competencies, sub-competencies, specific instructional objectives (see guidelines for specification of competencies).

V. Conceptualize Extended Degree Program Model Design Using Planning Papers of Extended Degree Program Developmental Guidelines #1.

APPENDIX

A. Some Descriptions of Competence and Competence Statements

B. Some Key Competence Decisions

C. Some Classifications of Competencies

D. Note from Competency-Based Education: A Process for the Improvement of Education

E. Generic Competencies Checklist

F. The Role of Academic Disciplines

G. Some options to be considered in developing the Extended Degree

Some Descriptions of Competence and Competence Statements

Florida State University

> An attainment consists of three principal elements: 1) a generic behavior or knowledge area; 2) an assessment task(s), and 3) a present standard of performance made public in advance of the assessment.

University of Houston

> Competence statements are derived from the role of the practicing professional, explicitly stating what the learner is to demonstrate for successful completion of the program, and made public in advance of instruction...may include cognitive objectives, with primary emphasis on performance and consequence objectives... an emphasis on the "ability to do".

University of Nebraska

> Competence is defined here as the specific skills a pupil can perform or knowledge he can apply in ways both he and his audience (the teacher) consider positive.

Stanley Elam (AACTE)

> Competencies are knowledge, skills, behaviors, to be demonstrated by the student.

Alverno College

> The notion of competence as a characteristic of the individual person rather than an enumeration of tasks. A competent student demonstrates certain abilities... The kinds of competence we are now seeking to foster do not develop in the abstract; they are developed only as an individual student works in the full context of academic and professional disciplines. The college has eight competence areas with four general levels and two specialized levels of or competence attainments.

Bowling Green State University (G. Wooditsch, 1976)

> "Competence" is a close surrogate for the word "capability" ...We need to grasp three things before we ascribe competence: 1) the behaving organism; 2) the demand it is striving to meet; and 3) if and how well the demand is met.

DePaul University

> The competencies are skills, knowledges, attitudes, and values which are stated in general terms, but are

translated into specific areas of content in each student's program and in the course offerings...For most competencies at least two facets should be present to demonstrate college-level achievement.

Illinois State University (F. Loepp)

The definition of competency by our group is: A competence is a complex coordinated behavior that is demonstrated over a given period of time...Our definition of competence is more than a behavioral objective. It is a complex coordinaced behavior.

University of Wisconsin-Stout (W. L. Face)

Competence may be defined as the state of having acquired certain characteristics. Different people will use different terms to define competency. Some would suggest that a competence is the ability to perform in a certain way, or more simply, what the person will be like after having completed certain experiences which are designed to result in a certain set of expected abilities or qualities...the competencies must be identified with reference to the expected situations, concerns or roles which the learners will face either in the present or the future. They must be stated in such fashion so that they may be observed, and thus, measured in some particular form. The specificity of the measurement should only be at the level which is necessary to ascertain if a competency is present. The competency should be validated and evaluated in reference to the performance or the specific roles from which they were derived. It is also very important that these competencies, once identified, be made public prior to holding the learner accountable for their performance.

Mars Hill College (Robert E. Knott)

Competence may be defined as the state of having requisite abilities or qualities. A curriculum designed around competencies consists of at least three basic elements: first, an overall statement of competencies to be acquired for a successful completion of the program; second, sets of evaluative criteria and standards for each competence which define the scope and level of proficiency required for successful attainment; and third, sets of experiences designed to assist the student in attaining the required competences.

Institute for Competence Assessment (Pottinger, Klemp, McClelland)

Competencies are interactive learning outcomes where skills and abilities are integrated.

From the standpoint of competency-based education, it is the meaningful integration of life skills that is important as an outcome of the educational experience.

The implication for CBE is that one cannot assume that abilities or skills discretely learned will be integrated in work and life functions and consequently, that establishment of minimal levels of performance on isolated skills or sub-competencies have much meaning in themselves.

Generic competence indicates clusters of action patterns that have a variety of action possibilities that can be measured more reliably to get indexes of various competency domains central to various life outcomes.

Fund for the Improvement of Post-secondary Education

Competence is the state or quality of being capable of adequate performance. Individuals are described as competent if they can meet or surpass the prevailing standard of adequacy for a particular activity.

Richard L. Meeth

"The minimum knowledge skills, values, and/or attitudes a person can be certified to possess based on a set of criteria or level of expectation".

Pauline M. Haynes

"Competencies and Their Assessment".

"Competency statements specify behaviors which are to be attained by the learner".

David A. Trivett

Competency Programs in Higher Education

"The meaning of competence, as has been shown, must be derived from an examination of the types of competencies a program requires. But, generally, competence is present when an individual can demonstrate skills and knowledge--or skills, knowledge, values, and attitudes--that are specified in some manner."

University of Minnesota College of Pharmacy

"Competency" is defined as an intellectual, attitudinal and a motor capability derived from a specified role and setting, and stated in terms of performance as a broad class or domain of behavior. Thus, the term "competency" is not synonymous with the terms "Behavioral Objective", "Performance Objective" or "Learning Objective". A competency can be analyzed and subdivided into one or more terminal performance objectives. Assessment of a competency must be holistic and conducted in an environment simulating the real world practice setting and role in which performance is expected to take place and from which the competency is derived. Performance of the competency in such a situation is necessary for predicting the successful transference of that competency to the real world. Attainment or mastery of a competency provides one with the ability to perform satisfactorily that function in the setting and the role from which the competency was derived.

William G. Spady - National Institute of Education

CBE: A data-based, adaptive performance-oriented set of integrated processes that facilitate, measure, record, and certify within the context of flexible time parameters the demonstration of known, explicitly stated, and agreed upon learning outcomes that reflect successful functioning in life roles.

Competencies are indicators of successful performance in life-role activities (be they producer, consumer, political citizen, driver family member, intimate friend, recreational participant, or lifelong learner).

Capacities (such as reading and computational skills, speaking ability, and motivation), when integrated serve as enablers or building blocks on which competencies ultimately depend. There are, of course, capacities such as sensitivity, awareness, and the appreciation of beauty which may serve as valuable enrichers of experience in roles that are more intrinsically referenced and that do not necessarily imply success in relation to externally referenced standards.

University of Massachusetts - Boston. The College of Public and Community Service

Competency is the ability to do something: to paint a portrait, solve a problem, assist a client, write a poem, analyze a neighborhood, or lead a group. In a competency-based curriculum, students are certified to possess the skills, knowledge, values, and attitudes necessary to perform such tasks competently. Education is focused not on taking courses, but on learning and demonstrating competencies.

Some Key Competence Decisions

1. Agree on the characteristics and prerequisites of the student population to be served by program.
2. Agree on the notion of competence or competency defining assumptions, goals, and what the terms mean in your program.
3. Look for the best way to classify competence statements or competencies, e.g., Professional Model, the structure of the learning expected; generic skills desired.
4. Decide on the format for the competence statements or competencies, i.e., whether general, specific, behavioral, (or, a combination).
5. If general, decide on how you will state more specific enabling competencies.
6. Decide if the agreed on competence statements, format, or competencies, allow you to evaluate the learning outcomes or attainments that the students in your program are to produce, i.e. Does the statement tend to be criteria-referenced for evaluation.
7. State and agree on initial competence statements, consider levels of skills required.
8. Agree on ways to evaluate competence statements. Agree on possible experiences to suggest for competence attainment.
9. Complete the above for all program outcomes classifications.
10. Revise, regenerate, revise.

(1)	(2)	(3)	(4)	(5)
Identification Comprehension Application Analysis Synthesis Evaluation	Knowledge Comprehension Application Analysis Synthesis Evaluation	Communication Skills Critical Thinking Problem-Solving Values Clarification Information Processing	Communication Skills Experimental Conformation Aesthetics and the Arts Comparative Culture Health and Ecology Business and Legal Aspect of Society Process Skills Area of Classifications	Cognitive Affective Performance Consequence or Product Exploratory or Expressive

(6)

Job-Role Functions

A. Theoretical Knowledge of Educational Concepts

1. Philosophical and Historical Concepts
2. Personal Philosophy Attributes and Characteristics
3. Use of Information

B. Implementation of Theoretical Concepts and Information in the Classroom

1. Learning Theory
2. Educational Research
3. Planning
4. Teaching Methods and Techniques

C. Developing Student's Abilities

1. Developing Student's Thinking Skills
2. Encouraging Student's Creativity
3. Developing Basic Skills
4. Widening Student's Comprehension

D. Teaching Technique

1. Widening Student's Comprehension
2. Grouping
3. Motivational Technique

E. Use of Resources

   1. Media

F. Evaluating and Measuring Student's Progress

   1. Use of Test Results as Feedback

G. Ethical Use of Evaluation Data

H. Adapting to Surroundings

I. Relating to Students

J. Knowledge of Growth and Development

   1. Individual Differences and Needs
   2. Special Problems

K. Awareness of Cultural Diversity

L. Clarifying Values

M. Professional Attitude

   1. Self-Evaluation
   2. Accountability
   3. Relating to Community

N. Knowledge of Educational System and Structure

   1. Career Patterns
   2. School Systems
   3. School Law
   4. School Finance

Task Analysis - Provides a viable alternative in the absence of validated research. Using this approach, each professional role is analyzed to determine the tasks performed by practioners; these are sythesized into competency statements.

In Discipline Mastery: Specify behavioral objectives necessary for mastery and organize course into units of mastery.

Notes from Competency-Based Education: A Process for the Improvement of Education (G. Hall and H. L. Jones, 1976)

1. Defining a competency is not simple, since competencies are not independent of the better known concepts of goals and objectives and must be defined relative to those concepts. All three--goals, competencies, and objectives, rest on a base of program assumptions.

2. Goals are the broadest statements one makes about the expected learning outcomes of a CBE program or course.

3. Objectives are behavioral descriptions of learning skills.

4. A. Competencies lie mid range on the continuum of goals to objectives. The general idea is that competencies should be more specific than goals, subcompetencies more specific than competencies. For any program there will be more competencies than goals, more subcompetencies than competencies and more objectives than subcompetencies.

   B. Goals encompass competencies, competencies encompass subcompetencies, and subcompetencies encompass objectives. Each descending step is more specific in terms of the ability of a learner to demonstrate its accomplishment.

   C. The difference might most readily be seen in the choice of verbs used in the statement of each. A goals statement might specify that the learner "will appreciate the aesthetic values of photography". An objective might specify that the learner will expose three sheets of photographic film focused on an 18 percent gray card at three successive f/stops. Obviously, "appreciate" is not as specific as "expose". Intermediate steps in this series might be a competency statement specifying that the learner "will be able to discuss aesthetic effects of control of exposure of photographic film" and a subcompetency specifying that the learner "will be able to describe the effects on film exposure of manipulating the camera's diaphram".

   D. Although a competency encompasses many identifiable individual behaviors or skills that can be specified in behavioral terms, a competency is a statement that describes the observable demonstration of a composite of the specific skills. The learning of a large list of individual skills is of little value unless these skills can be combined and interrelated so that, with practice, the result is a capability for a performance by the learner that is greater than the sum of the individual skills.

E. A competency statement then, is a description of those performances that are based on the acquisition, integration, composite building, and application of a set of related skills and knowledge. These performances entail a growth process, a gestalt building, as well as the learning of individual skills. The learning of individual skills is not where the emphasis should be in any educational program. The emphasis in CBE, as the name implies, is on competencies, on the ability to develop and demonstrate a total performance, not just the mere learning of specific skills.

5. An example in language arts:

Goal:	All educated persons should be able to communicate.
Competency:	The student will be able to demonstrate his writing ability.
Subcompetency:	The student will be able to write a short essay.
Objective:	The student will write a short essay comparing any two stories with respect to realism, relevance, and mood. Each paragraph in the essay will include a topic sentence.

6. A concept important to the understanding of the planning and operation of competency-based education is that individual skills do not always equal the whole. The most important function of the instructor is that of helping the learner incorporate newly learned skills into his personal style, always keeping the gestalt of the operation in mind.

Generic Competencies Checklist

Are competencies operationally defined for easy understanding by students and teachers?

Are competencies too specific? (Generic Skills versus Observable Skills Performance)

Are competencies reduced to the point that they are intuitively and empirically of minor importance?

Are competencies only action oriented?

Are competencies readily recognizable as important, meaningful, useful, and easy to understand?

Are competencies linked to external realities?

Do competencies ask the student to be proactive in situations which provide only partial information?

a. Are students required to process new information?
b. Are students required to integrate new information?
c. Are students required to implement information solutions?
d. Or, do they emphasize, Knowing, Applying, Evaluating?

Or, do they require students to:

a. Formulate and examine purposes.
b. Demonstrate the ability to design and act upon means of executing those purposes.
c. To assess consequences for themselves and others of designed action on selected or formulated purposes.

Do competencies suggest appropriate minimal levels or levels of sufficiency of proficiency performance?

Do competencies suggest interactions of minimal levels of performance?

Are competencies designed to be equivalent substitutes for traditionally assessed school achievements or, do they move beyond recognized limitations of traditional systems?

Are the comptencies generic, i.e., do they promote critical and discerning thinkers, competent problem solvers, etc., or simply retention and recall?

Are the competencies generic, i.e., are they recurrent either as a component or a structuring principle in a whole series of discrete behaviors?

Do competencies have general significance to a wide variety of career and life outcomes?

Do competencies have practical utility for educators?

Do competencies elicit operant behaviors?

Do competencies tend to be quantifiable or assessable?

The Role of Academic Disciplines: Notes of Woditsch, 1975

The justification for employment of the academic disciplines lies in their capacity to illiminate the fruitful application of cognitive skills in expansive domains of human experience. The body of knowledge a discipline proffers is the product of much higher order cognition working in a delimited context...great modal phenotypes of thought in action--genotypic skills applied. The disciplines push man past centuries of trial and error, and give precedence for great swaths of his experience that would otherwise remain enigmatic...

It's the process of the disciplines--their way of thinking about, or manner of approaching phenomena--that should be to the student and exercised within him. The objective is internalization by the student of those modes of higher order cognition which disciplinarians employ to produce their knowledge, so the disciplines are employed to accelerate the student's exchanges with his environment, with the purpose of articulating and maturing his cognitive capabilities.

Current examplars of competency-based general education programs--curricula at places like Alverno College, Mars Hill College, and Sterling College--are sensitive to the distinction between mastery of disciplined-based knowledge and mastery of discipline--producing modes of thought, and strive to employ the disciplines explicitly as tools for the maturation of student capabilities.

An assumption of General Education is that what is wanted from the disciplines for the general education mission is their utility in developing student capabilities, not discipline integrity.

Beyond wielding disciplinary ways of thinking, it is hoped the student can move, at less cost in trial and error, toward multi-, inter-, and trans-disciplinary articulations of generic capabilities.